

Review Solving Equations

Name: _____

1. Solve for x and show a check for each of the following:

a) $3(x - 5) = 18$

b) $0.2(x + 3) = 1.4$

c) $\frac{x+3}{-0.4} = 2$

2. Solve and verify each of the following.

a) $2(x - 4) = 12$

b) $3(m + 0.5) = -2.1$

c) $1.2(x + 1.3) = 2.4$

d) $\frac{3}{4}(x - 8) = 7\frac{1}{2}$

e) $\frac{x-2}{3} = \frac{-7}{18}$

f) $\frac{x+2}{4} = \frac{x-3}{5}$

g) $4(x - 2) + 5 = 3 + 2(x - 3)$

h) $1 + 5(x - 1) = 4(x - 3) + 6$

$$i) 3(x-2) + 12 = 6x - 3(4-x)$$

$$j) 11 - 2(5 + 3x) = 2(x-6) + 14$$

$$k) \frac{1}{2}x + 3 = \frac{2}{3}x$$

$$l) \frac{1}{4}(x+2) = \frac{1}{3}(x-1)$$

3. Identify the error in each of the following. Then, write the correct solution.

$$a) 0.4(x + 2.2) = 5.4$$

$$b) \frac{x+3}{5} = \frac{4}{7}$$

$$0.4x + 2.2 = 5.4$$

$$5\left(\frac{x+3}{5}\right) = \frac{4}{7}$$

$$0.4x = 3.2$$

$$x+3 = \frac{4}{7}$$

$$x = 8$$

$$x = \frac{-17}{7}$$

Answers:

$$1a) x=11, \text{ check} = 18, \quad b) x=4, \text{ check} = 1.4, \quad c) x=-3.8, \text{ check} = 2$$

$$2a) x=10, \text{ verify} = 12, \quad b) m=-1.2, \text{ verify} = -2.1 \quad c) x=0.7, \text{ verify} = 2.4$$

$$d) x=18, \text{ verify} = 7.5 \quad e) x=\frac{5}{6}, \text{ verify} = \frac{-7}{18} \quad f) x=-22, \text{ verify} = -5$$

$$g) x=0, \text{ check} = -3$$

$$h) x=-2, \text{ check} = -14$$

$$i) x=3, \text{ check} = 15$$

$$j) x=-1/8 \text{ or } -0.125, \text{ check} = 1.75$$

$$k) x=18, \text{ check} = 12$$

$$l) x=10, \text{ check} = 3$$

$$3a) \text{ Didn't use distributive property } x=11.3 \quad b) \text{ Didn't multiply BOTH sides by the Common denominator}$$

$$x = \frac{-1}{7}$$